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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/556,069	04/21/2000	Sai V. Allavarpu	5181-46100	6902

7590 01/22/2004

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EXAMINER

LIN, WEN TAI

ART UNIT	PAPER NUMBER
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2154

DATE MAILED: 01/22/2004

12

Please find below and/or attached an Office communication concerning this application or proceeding.

P24

Office Action Summary

Application No.

09/556,069

Applicant(s)

ALLAVARPU ET AL.

Examiner

Wen-Tai Lin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 740.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-34 are presented for examination. Claims 1, 13, 25, 31 and 33 have been amended.
2. The text of those sections of Title 35, USC code not included in this action can be found in the prior Office Action.

Claim Rejections - 35 USC § 102

3. Claims 1, 10-11, 13, 22-23, 25, 28-29, 31 and 33 are rejected under 35 U.S.C. 102(e) as being anticipated by Carre[U.S. Pat. No. 6282579].
4. Carre was cited in the previous office action.
5. As to claims 1 and 10, Carre teaches the invention as claimed including: a method for mapping managed object metadata [note that, by default, data type is part of the metadata of a managed object], the method comprising:
 - receiving a plurality of communication each pertaining to a different one of a plurality of managed objects from a management server for the managed objects, wherein each communication comprises data typed according to an

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- abstract syntax notation [col.5, lines 9-16; col.4, lines 49-51; i.e., OM and OA are the plurality of OSI objects that are specified using ASN syntax]; and
- accessing a converter interface [i.e., the GDMO/IDL interface of Fig.2b] for each communication for converting the abstract syntax notation data types of each communication to interface definition language data types, wherein the same converter interface is accessed for each of the managed objects such that said converting is generic to the managed objects [col.5, lines 25-39; i.e., Carre's converter is generic to the managed OA and OM objects], wherein said converting comprises:
 - inputting a first data type from a first set of data types, wherein the first set of data types is expressed in an abstract syntax notation, and wherein the abstract syntax notation comprises a language for describing data [Fig.2a; col.5, lines 4 - 39]; and
 - determining a corresponding second data type from a second set of data types wherein the second set of data types is expressed in an interface definition language, wherein the interface definition language comprises a language for implementing interfaces to managed objects, wherein the interface definition language is operable across a plurality of platforms and across a plurality of programming languages, and wherein the interface definition language is class independent and returning the second address type [Figs.4a & 4b; col.6, lines 30-35; note that IDL is operable across a plurality of platforms and across a plurality of programming languages].

6. As to claim 11, Carre further teaches that the abstract syntax notation comprises Guidelines for Managed Objects (GDMO) [col.5, lines 4-9].

7. As to claims 13, 22-23, 25, 28-29, 31 and 33, since the features of these claims can also be found in claims 1 and 10-11, they are rejected for the same reasons set forth in the rejection of claims 1 and 10-11 above.

Note that, claims 13-24 correspond to claims 1-12 respectively. Claims 1-12 relate to a forward data type mapping (i.e., each IDL data type is converted to a corresponding data type in abstract syntax notation (or ASN.1)). On the other hand, claims 13-24 relate to a reverse data type mapping (e.g., mapping from ASN.1 to IDL). In Carre's system the reversed mapping should coexist with the forward mapping because the communication is bi-directional. For example, according to at least Figs. 1 and 2a, while a message (i.e., a request object) is communicated from a client to a server via CORBA mechanism (i.e., using the two communication functions GDMO/C++ and CMISE/IDL), the request object experiences a forward data type conversion (e.g., from ASN.1 to IDL). In a like manner, a response message returned from the server (to the client) must experience a reverse data type conversion (i.e., from IDL to ASN.1).

Claim Rejections - 35 USC § 103

8. Claims 2-6, 12, 14-18, 24 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carre [U.S. Pat. No. 6282579], as applied to claims 1, 10-11, 13, 22-23, 25, 28-29, 31 and 33 above, further in view of AAPA [Applicant admitted prior art].

9. As to claims 2-6 and 12, Carre did not specifically generalize the mapping of metadata to include:

- a telephone system;

- a network switch;

- type information about an attribute of one of the managed objects; and

- type information about a notification of one of the managed objects.

However, AAPA teaches that information such as telephone system, network switch (or device), attributes and events (such as notification) constitute the metadata of managed objects and can obviously be described using GDMO's ASN1 notation [Specification: page 2, lines 1-16; page 4, lines 5-10 and page 6, lines 19-23].

It is obvious that Carre's system/method is also applicable to these managed objects because Carre's system/method is generally applicable to objects that can be modeled as OSI or CORBA objects [Carre: col.4, lines 39-51].

10. As to claims 14-18, 24 and 26-27, since the features of these claims can also be found in claims 1-6, 12-13 and 25, they are rejected for the same reasons set forth in the rejection of claims 1-6, 12-13 and 25 above.

11. Claims 7-9, 19-21, 32 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carre [U.S. Pat. No. 6282579], as applied to claims 1-6, 10-18, 22-29, 31 and 33 above.

12. As to claims 7-9, Carre does not specifically teach mappings between the following:

- a primitive data type and a generic primitive data type;
- an object data type and a sequence of the generic primitive data type;
- an object data type and a choice structure comprising a selector, value fields and various data types,

wherein the latter being a data type in an interface definition language and the former being a data type in the abstract syntax notation.

However, since these corresponding pairs are known data types for describing OSI and CORBA objects in their respective languages, it is obvious that, under Carre's methodology (as described in Fig.2a and col.5, lines 24-39), a mapping between these pairs must be established, because Carre's CMISE services require type interoperability between the data types expressed in the abstract syntax notation and the interface definition language.

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13. As to claims 19-21, 32 and 34, since the features of these claims can also be found in claims 1, 7-9, 13, 31 and 33, they are rejected for the same reasons set forth in the rejection of claims 1, 7-9, 13, 31 and 33 above.

14. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carre [U.S. Pat. No. 6282579], as applied to claims 1-29 and 31-34 above, further in view of Goldberg et al.(hereafter "Goldberg") [U.S. Pat. No. 6496833].

15. Both Carre and Goldberg were cited in the previous office action.

16. As to claim 30, Carre does not specifically teach how the data type mapping is carried out.

However, Goldberg teaches that data type conversion may be implemented with table lookup [Goldberg: col.12, lines 1-5].

It is obvious to one of ordinary skill in the art that Carre's data type conversion can be optionally implemented as a table lookup because mapping with table lookup is a simple and straightforward, and has been widely adopted.

17. Applicant's arguments with respect to claims 1-34 on 12/29/2003 have been considered but they are not deemed to be persuasive.

18. In the remarks Applicant argues that Carre does not teach a management server for a plurality of managed objects because the implementations shown in Figs. 2a-5 are for a particular manager and agent or object, and therefore Carre's converter is not generic for a plurality of managed objects.

19. The examiner respectfully disagrees with Applicant's argument: (1) based on the passage at col.5, lines 9-20, Carre teaches that the components M (manager) and A (agent) each consists of one or more OSI objects (which are specified in ASN syntax according to the passage at col.4, lines 39-51); and (2) the passage at col.5, lines 30-39 states that these OA and OM objects have to be converted from ASN.1 to IDL before making use of the CORBA communication platform. As such, it is clear that Carre's converter must be generic enough to handle the plurality of OA and OM objects.

20. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

21. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wen-Tai Lin whose telephone number is (703)305-4875. The examiner can normally be reached on Monday-Friday(8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (703)305-8498. The fax phone numbers for the organization where this application or proceeding is assigned are as follows:

(703)872-9306 for official communications; and

(703)746-5516 for status inquires draft communication.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

Wen-Tai Lin

January 13, 2004

Wen-Tai Lin
1/20/04